

Guidance for Farmers in Nitrate Vulnerable Zones

The derogated livestock manure N farm limit

December 2009

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The guidance in this series of leaflets is designed to help farmers comply with The Nitrate Pollution Prevention Regulations 2008 and The Nitrate Pollution Prevention (Amendment) Regulations 2009. The guidance has been produced in association with the Environment Agency, who is responsible for assessing farmers' compliance with these Regulations.

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The Nitrate Pollution Prevention Regulations (2008) establish a livestock manure nitrogen farm limit of 170 kg N per hectare per year (N/ha/yr). Leaflet 5 provides full details of this limit for non-derogated farms.

The Nitrate Pollution Prevention (Amendment) Regulations (2009) allow you to apply for a derogation from this limit *if* you submit a successful application each calendar year *and* you meet the conditions contained in this leaflet. If your application is approved, you will be able to apply up to 250 kg of manure nitrogen (N) from grazing livestock per hectare per year on your farm.

If you intend to apply for a derogation you should use this leaflet rather than Leaflet 5.

2009 DEROGATIONS:

For 2009, the Regulations retrospectively grant you a derogation where 70% or more of the agricultural area of your farm was sown with grass, including land under your control. Therefore, you do not need to make an application for 2009.

You will not be expected to have complied with the full set of conditions or record keeping requirements described in this leaflet during 2009. If you have taken advantage of the derogation in 2009 and complied with the higher limit of 250 kg N/ha/yr from grazing livestock on your farm, you must ensure you have:

- recorded the percentage of your farm that was grass during 2009; and
- calculated your compliance with the 250 kg N/ha/yr and 170 kg N/ha/yr limits, as appropriate.

DEROGATIONS FROM 2010 ONWARDS:

In summary, the requirements on derogated farms from 1 January 2010 onwards are:

The Higher Limit

YOU MUST:

- **Ensure that the total loading of nitrogen in livestock manure to your farm does not exceed the following loading limits:**
 - 250 kg N per hectare per year from grazing livestock (cattle, sheep, deer, goats and horses)
 - 170 kg N per hectare per year from non-grazing livestock (veal calves, pigs and poultry)

These limits are not additive.

- **Follow a defined process when calculating your compliance with these limits.**

Eligible Farms:

- **YOU MUST ensure that at least 80% of the agricultural area of your farm is grass.**

Annual Application:

- **YOU MUST submit an application for each calendar year that you wish to have a derogation.**

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Land Management Conditions:

YOU MUST:

- **Prepare a nitrogen and phosphate application plan for each field.**
- **Plant a crop with a high nitrogen demand immediately after ploughing grassland.**
- **NOT plough up temporary grassland on sandy soils between 1 July and 31 December.**
- **NOT plough up an area of grass before 16 January if you have spread livestock manure to that area between the following dates:**
 - Sandy soils 1 Sept to 31 Dec
 - All other soils 15 Oct to 15 Jan
- **NOT include leguminous or other atmospheric nitrogen-fixing plants in the crop rotation (except grass with less than 50% clover or legumes under-sown with grass).**

Record Keeping:

YOU MUST:

- **Keep a record of your calculation showing compliance with the livestock manure N farm limits plus other records outlined in this leaflet.**
- **Submit some of these records to the Environment Agency for inspection by 30 April in the calendar year following the derogated year.**

The boxes below describe the conditions which apply to derogated farms in more detail and the following paragraphs provide further explanation.

Information on how to apply for a derogation is given at the back of this leaflet in Annexes 1 and 2. Annex 3 provides a step-by-step guide to help you with the calculations and record-keeping required to demonstrate your compliance. Annex 4 provides details of the field-level records you must keep, Annex 5 the crop area records and Annex 6 the records of stocks and purchases of manufactured nitrogen fertilisers.

IMPORTANT NOTES:

- The Environment Agency is responsible for checking compliance with the NVZ rules. Every year, they will visit at least 3% of farms with a derogation, to meet the terms of the European Commission Decision.
- If you fail to comply with any of the conditions described in the boxes below, then the Environment Agency will:
 - for minor breaches, issue a warning letter requiring you to take corrective action. Failure to comply with this warning letter may lead to the withdrawal of your derogation; or
 - for major breaches, withdraw the approved derogation for your farm. If there was cause to withdraw your derogation, the 170 kg N/ha/yr limit would apply to your farm and any exceedence of this limit would be considered to be an offence. This may result in a deduction from your Single Payment and/or a formal caution or prosecution (which could result in fines).

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- Most of the record-keeping requirements described in this leaflet are similar to those described in the other NVZ Guidance leaflets that are applicable on all farms in an NVZ. *New requirements that are only applicable on derogated farms are in italics to help you identify what information you will need to add to your existing records.*
- The European Commission agreement allowing derogations to be granted in England expires on 31 December 2012. Defra may seek to extend this agreement for a further four years, but there is no guarantee that this provision for future derogations will be possible.

1. The livestock manure N farm limits on derogated farms

The derogation allows the loading of manure N from grazing livestock up to a higher limit of 250 kg N/ha/yr on your farm. On farms without a derogation, manure from all types of the specified livestock must comply with a livestock manure N farm limit of 170 kg N/ha/yr.

If you are granted a derogation, then you must calculate and demonstrate your compliance with the livestock manure N farm limits described below.

YOU MUST ensure that, in the calendar year beginning 1 January:

- the total amount of nitrogen in livestock manure from **grazing livestock** (cattle (excluding veal calves), sheep, deer, goats and horses) that is applied to your farm, whether directly by grazing animals or by spreading, does not exceed a **limit of 250 kg N/ha/yr**; and
- the total amount of nitrogen in livestock manure from **non-grazing livestock** (veal calves, pigs and poultry) that is applied to your farm does not exceed a **limit of 170 kg N/ha/yr**.

These limits are not additive. If 250 kg N in manure from grazing livestock is applied to a hectare on your farm, you cannot apply a further 170 kg N in manure from non-grazing livestock.

If you expect to exceed these limits, then you should make arrangements to:

- reduce the amount of nitrogen in livestock manure on your farm either by sending it off your farm (exporting), and/or
- reduce your livestock numbers; and/or
- increase the area of land under your control.

To help with your calculation, you can use the step-by-step guide provided at the back of this leaflet (Annex 3) or the PLANET v3.0 software (see Further Information). The Environment Agency will accept both as a valid method for recording your calculation, although other methods and software may also be acceptable.

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Other important points to note when calculating your compliance with the livestock manure N farm limits:

Timing

You will need to calculate your compliance with the livestock manure N farm limits twice a year:

1. At the time you apply for a derogation your application (see section 2 and Annex 1) will need to demonstrate that you *will* be able to comply with the livestock manure N farm limits over the course of the coming calendar year. The calculation will have to be made on the basis of the number of livestock you *expect* to keep on your farm during the year, the total amount of livestock manure you *expect* to import or export during the year, and the agricultural area of your farm including rough grazing land and any rented land under your control on 1 January.
2. By 30 April following the end of the calendar year you will need to demonstrate that you did comply with the livestock manure N farm limits. The calculation must be made on the basis of *actual* livestock numbers kept on the farm, *actual* imports or exports of livestock manure, and the *actual* agricultural area of your farm.

You will need to record key information during the year to help you with your calculation (see Sections 3 and 5).

Livestock types

The livestock manure N farm limits only apply to manure produced by the types of livestock specified in Tables 1 – 4 of Leaflet 3 (i.e. cattle, sheep, deer, goats, horses, pigs and poultry). If you keep other types of livestock then the manure produced by these animals does not count towards the limits.

The higher limit of 250 kg N/ha/yr allowed by the derogation only applies to manure from grazing livestock. These are cattle (except veal calves), sheep, deer, goats and horses. It does not include pigs or poultry which are classed as non-grazing livestock.

Calculating the nitrogen content of livestock manure

YOU MUST use the standard values provided in Tables 1 – 4 of Leaflet 3 to determine the amount of nitrogen produced from both grazing and non-grazing livestock kept on your farm.

Alternatively, in the case of permanently housed pigs and poultry, you may use the following instead of the standard values:

- values calculated using the ENCASH¹ computer software; or
- values determined by sampling and analysis of the manure (only permitted if your housing system only produces solid manure).

You must use the manure sampling protocol provided in Leaflet 3. To convert the results of sampling and analysis into a value for annual manure N production, you will need to estimate the total weight of the manure that is produced on the farm during the year. This can be done by using a weighbridge to weigh a typical trailer-load of the manure, then counting the total number of trailer-loads produced during the year.

¹ ENCASH will calculate a manure nitrogen production value for 'other' livestock types based on the specific diets and production system used on your farm. See 'Further information' for details of how to obtain a copy of this software.

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Calculating the nitrogen content of any imports/exports of livestock manure

When determining the amount of nitrogen contained within any livestock manure that is brought onto (imported) or sent off (exported) your farm YOU MUST use either:

- the standard values provided in Table 7, Leaflet 3; or
- sampling and analysis of the manure.

Calculating the agricultural area of your farm

You should base your calculation on the concept of including land “under your control” in the same way as it is defined by the Single Payment Scheme rules. You must ensure that you have sufficient documentary evidence to prove to an inspector that the land was under your control for the period of the derogation. Further guidance on determining whether or not land is under your control is available in Fact Sheet 3 ‘*Who is responsible for complying with the Nitrate Vulnerable Zones Regulations?*’ published in the Defra/Environment Agency NVZs Questions and Answers (see Further Information).

When calculating the agricultural area of your farm YOU MUST exclude areas of surface water, any hard-standing, buildings, roads or woodland unless the woodland is used for grazing.

If the size of your farm changes during the year, YOU MUST update your calculation of the agricultural area within one month of the change. If the size of your farm changes during the year, you should take account of the change on a pro-rata basis when calculating your compliance with the livestock manure N farm limit.

2. Applying for a derogation

You must apply annually for each year you wish to have a derogation on your farm. No application was necessary in 2009.

YOU MUST submit an application between:

- 1 January 2010 and 31 March 2010 for a derogation in 2010
- 1 October 2010 and 31 December 2010 for a derogation in 2011
- 1 October 2011 and 31 December 2011 for a derogation in 2012.

Your completed application will be used to determine if you are eligible for a derogation. To be eligible you must be able to comply with:

- The appropriate livestock manure N farm limits (see Section 1)
- The minimum percentage of grassland (see Section 4a)

There are three ways to apply for a derogation:

1. online via the Whole Farm Approach (WFA) website;
2. by telephone;
3. by post;

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Guidance on how to apply is provided at Annexes 1 and 2. Annex 3 provides a step-by-step guide to calculate the figures needed prior to applying.

3. Farm and field information

If your application for a derogation is approved, you are required to keep the following information on your farm available for inspection.

(a) Farm-level information

The following information about your farm **MUST** be available from 1 March of the derogated year:

- The agricultural area of your farm, *and the area of grassland as of 1 January*;
- A map of your farm indicating the location of individual fields (this must correspond to the recorded agricultural area of your farm and each field must have a reference number/name);
- *A description of the livestock housing and manure storage systems in place on your farm, including the volume of the manure storage available;*
- *The expected numbers and type of livestock to be kept on your farm during the calendar year and an estimate of the manure nitrogen and phosphate that these animals will produce; and*
- *The amount and type of livestock manure that you intend to import or export during the year and an estimate of the amount of nitrogen contained in the manure.*

These requirements do not apply to derogations in 2009. If you intend to take advantage of the derogation granted retrospectively for 2009, **YOU MUST** record the average percentage area of your farm that was sown with grass in 2009.

Annex 3 can help you calculate the figures needed and Leaflet 4 (Step 6 of Annex 1 and Step 4 of Annex 2) can help you record information on the capacity of your manure storage facilities. If you already have a risk map, as described in Leaflet 8, this can be used (or a sketch map) although it will need to be amended so that your field records can be cross-referenced with the map. Again, this must be updated within one month of any change to the size of your farm.

The PLANET software (see Further Information) can also help you record most of the required information (with the exception of the risk map).

(b) Field-level information

Planning the use of nitrogen and phosphate fertiliser

You will need to undertake the following four steps to plan how much nitrogen and phosphate fertiliser to apply to your crops (including grass). This is very similar to the planning process described in Leaflet 6 (Planning Nitrogen Use), except it also requires you to plan the use of phosphate fertiliser.

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You MUST plan your applications of nitrogen *and phosphate* fertiliser to each crop in each field before any nitrogen or phosphate fertiliser is applied. The plan MUST show that you have undertaken the following four steps:

- Step 1.** Assessed the amount of nitrogen *and phosphorus* in the soil that is likely to be available for crop uptake during the growing season. *Sampling and analysis for soil phosphorus (P) MUST be done at least once every four years;*
- Step 2.** Calculated the optimum amount of nitrogen *and phosphate* that should be applied to the crop, taking into account the supply of these nutrients from the soil;
- Step 3.** Calculated the amount of nitrogen *and phosphate, from any planned applications of organic manure, that is likely to be available for crop uptake in the growing season in which it is spread;* and
- Step 4.** Calculated the amount of manufactured nitrogen *and phosphate* fertiliser required.

These requirements do not apply to derogations in 2009.

You must complete Steps 1 and 2, and the related records:

- In the case of permanent grassland, each year beginning 1 January, before the application of any nitrogen or phosphate fertiliser (including manufactured fertiliser and organic manure).
- In the case of any other crop (e.g. arable, temporary grass), before any nitrogen or phosphate fertiliser (including manufactured fertiliser and organic manure) is applied for the first time to a crop or to a field intended to be planted.

Steps 3 and 4, and the related records, must be completed before each application of manufactured fertiliser or organic manure.

Regarding Step 1, the assessment of nitrogen and phosphorus in the soil:

- *Nitrogen* – You can assess the soil nitrogen supply (SNS) using an index value based on information about the soil type, previous cropping, previous manure and fertiliser use and winter rainfall. Alternatively, you can use soil sampling and analysis. This will need to include an estimate of the amount of nitrogen that is likely to become available for crop uptake due to the mineralisation of soil organic matter and from previous crop residues.
- *Phosphorus* – Sampling and analysis for soil phosphorus (P) MUST be done at least once every four years. You can rely on the results of previous sampling and analysis provided they are less than four years old. If you have not previously undertaken sampling and analysis for soil P then you must sample at least 75% of the agricultural area of your farm by 1 March 2011 and the remaining 25% by 1 March 2012. You can, of course, choose to sample 100% of your farm at one time – this might be more cost effective.

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Field records relating to the planning process

The Environment Agency will assess whether you have completed each of the four 'planning' steps by inspecting your field records.

For each crop in each field, YOU MUST keep the following records:

- your four step plan for applications of nitrogen *and phosphate* fertiliser;
- details of the actual applications of manufactured nitrogen *and phosphate* fertiliser and organic manure; and
- details of the crop grown, *including the date of ploughing up grass* (where relevant).

A full description of the required records is provided in Annex 4. These requirements do not apply to derogations in 2009.

You should already regularly produce a plan for nitrogen applications on your farm and keep records of your applications of organic manure and manufactured nitrogen fertiliser – these are existing requirements of the NVZ Regulations and are described in Leaflet 6. These records should be sufficient for derogated farms provided they are adapted to contain the additional information required for phosphate (planned and actual applications) and the date of ploughing up grass.

There is a wide range of software available to help you plan your fertiliser applications and keep subsequent records of actual applications (e.g. the PLANET software). Alternatively, the templates provided in the "Tried & Tested" nutrient management plan can also be used (see Further Information).

4. Land management

If you are granted a derogation, you must follow the land management conditions summarised in the following boxes.

(a) Minimum area of grass

YOU MUST ensure that at least 80% of the agricultural area of your farm including any other land under your control, is grass during the derogated calendar year.

For 2009 derogations, at least 70% of the agricultural area must be grass.

Grass means permanent or temporary grassland ('temporary' means leys of less than four years). It includes grass with less than 50% clover and other crops (e.g. maize) under-sown with grass. An area of land can be classified as grass between the date of sowing grass and the date of ploughing.

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(b) Rules relating to the cultivation of grass

YOU MUST NOT plough up an area of grass before 16 January if you have spread livestock manure to that area between the following dates:

Sandy soils	1 Sept to 31 Dec
All other soils	15 Oct to 15 Jan

YOU MUST NOT plough up temporary grass on sandy soils between 1 July and 31 December.

If you plough up an area of grass, YOU MUST **plant a crop with a high nitrogen demand** within four weeks of the date of ploughing (six weeks if the following crop is grass).

Some high nitrogen demand crops are:

- Grass, potatoes, sugar beet, maize, wheat, oilseed rape, barley, brassicas, rye and triticale.

These rules do not apply to derogations in 2009.

Ploughing up grass will release large amounts of nitrogen. Therefore, care needs to be taken to minimise the risk of this nitrogen being leached into watercourses by not ploughing in the autumn or early winter and to ensure that as much of the nitrogen released is taken up by the following crop.

Other important points to note in relation to these rules include:

- A definition of 'sandy' soils is provided in Leaflet 3, Glossary.
- If at all possible, avoid ploughing permanent grassland. Large quantities of nitrate can be leached over several years, organic matter will be lost and carbon released to the atmosphere. Also, ploughing permanent pasture may breach cross compliance requirements.
- If you decide to plough grass, you should do this in the spring rather than autumn (on sandy soils you must not plough grass between 1 Sept and 31 Dec – see box above).
- The list of crops to follow ploughed grass is not exhaustive. If you wish to grow a crop that is not listed above, you may still be able to grow this crop if you can demonstrate to the Environment Agency that it has a high nitrogen requirement.

(c) Rules relating to crop rotations

YOU MUST NOT grow leguminous or other atmospheric nitrogen-fixing plants on the farm. This does not apply to grass with less than 50% clover or to other legumes that are under-sown with grass.

This rule does not apply to derogations in 2009.

You will not be refused a derogation in 2010 if you have planted leguminous or other atmospheric nitrogen-fixing plants before January 2010. However, such plants must not be planted again after this date if you are granted the 2010 derogation.

The clover content of grass swards is unlikely to exceed 50% under normal growing conditions. Clover coverage can be assessed visually in the field and industry guidance is available to help (see Further Information).

5. Record-keeping requirements

To demonstrate your compliance with the conditions described in this leaflet you will need to keep a number of records. These will need to be kept on your farm and be available for inspection by the Environment Agency. Some information must also be submitted to the Agency for inspection and a pro-forma will be available later in the year with details of the information required. You can also submit the required information via the Whole Farm Approach website.

By 30 April in the year following a derogation, YOU MUST record the following information relating to the previous calendar year:

- *Field-level records (see Section 3b and Annex 4);*
- *A copy of your application for a derogation and the notice of approval;*
- *The numbers of livestock kept on your farm during the calendar year;*
- *Your calculation of the amount of nitrogen and phosphate produced by these animals;*
- *A copy of your manure sampling and analysis and/or ENCASH results if applicable;*
- *Details of any imports or exports of livestock manure, and the nitrogen and phosphate content of that manure;*
- *The agricultural area of your farm and the areas covered by the following crops: winter wheat, spring wheat, winter barley, spring barley, winter oilseed rape, sugar beet, potatoes, forage maize and grass (including crops under-sown with grass) (see Annex 5); and*
- *A summary of stocks and purchases of manufactured nitrogen fertilisers (see Annex 6).*

A full description of the required records you must keep is given in Annex 4.

Records of livestock numbers kept on your farm during the previous calendar year

Your records must enable you to identify which of the animals kept on your farm fall into the livestock categories listed in Tables 1 – 4 of Leaflet 3 (i.e. cattle, sheep, deer, goats, horses, pigs and poultry). To identify which category the animals fall into, you may need to keep details of their gender, age and/or weight. You will also need to record how long these animals were kept on your farm during the derogation year.

Records of imports/exports of livestock manure

If you bring livestock manure onto your farm, or send it off, you will need to keep the following records:

- the type and amount of livestock manure;
- the total nitrogen content of that manure, either from standard figures (Table 7, Leaflet 3) or sampling and analysis;
- the date it was brought onto/sent off your farm; and
- the name and address of the supplier/recipient.

You will also need to keep details of a contingency plan to be used if you are unable to send the manure off your farm.

You must keep all records for at least five years.

6. Further Information

The NVZ helpline has been established to assist with the interpretation of the NVZ rules. The helpline number is **0845 345 1302** (8am – 6pm). The helpline is run by Momenta on behalf of Defra and will be available until 31 March 2010.

Further advice to understand and interpret the rules in specific circumstances is given in 'Nitrate Vulnerable Zones (NVZs) – Questions and answers'. This can be found at www.environment-agency.gov.uk/nvzs

The Whole Farm Approach (WFA) website can be accessed via <https://secure.wholefarm.defra.gov.uk/wps/portal>

The Environment Agency can be contacted on **0845 603 3133** (Mon-Fri, 8am – 6pm) during the application period for telephone applications or to request a paper application form. For the hard of hearing a minicom service is also available by calling 08702 422 549

Obtaining copies of the documents or software referred to in this leaflet:

- The Fertiliser Manual (RB209) is due to be released by Defra in 2010. The Fertiliser Manual (RB209) is the revised version of Defra's Fertiliser Recommendations for Agricultural and Horticultural Crops (RB209) publication (7th edition, 2000), available electronically at: www.defra.gov.uk or in hard copy from The Stationery Office, PO Box 29, Norwich NR3 1GN or at: www.thestationeryoffice.com
- A free copy of the PLANET or ENCASH software can be obtained by going to www.planet4farmers.co.uk or by telephoning 08456 023864. PLANET v3.0 will be released in 2010 and will be able to carry out the necessary calculations required on derogated farms.
- A free copy of the MANNER software can be obtained by telephoning 01623 844331 or by going to www.adas.co.uk/manner
- The "Tried & Tested" – Nutrient Management Plan is available via www.nutrientmanagement.org
- The Clover Ring is a practical pasture management aid designed to help livestock farmers estimate sward clover content. It is available on request from British Seed Houses (01179 823691 or 01522 868714).
- *A Code of Good Agricultural Practice – Protecting our Water, Soil and Air* (2008) is available from www.defra.gov.uk or 08459 33 55 77.

Annex 1 – Applying for a Derogation

1. When must I apply for a derogation?

For 2009, the Regulations retrospectively grant you a derogation where 70% or more of the agricultural area of your farm was sown with grass, including land under your control. Therefore, you do not need to make an application for 2009.

From 2010, for each calendar year that you want the higher limit of 250 kg N/ha/yr to apply to your farm, you must complete and submit a successful application for a derogation and comply fully with all the rules described in this leaflet.

Applications must be submitted between:

- 1 January 2010 and 31 March 2010 for a derogation in 2010
- 1 October 2010 and 31 December 2010 for a derogation in 2011
- 1 October 2011 and 31 December 2011 for a derogation in 2012.

2. How do I apply for a derogation?

You can apply for a derogation either via the Whole Farm Approach (WFA) website, by telephone, or by post. No charge will be made for the application.

Via the WFA website

This is the preferred route for making applications because it:

- will provide you with an instant response to your application (approval or rejection) giving you plenty of time to re-apply should your application be rejected (e.g. to correct any mistakes made in your application which may have led to its rejection);
- reduces the risk of submitting incomplete or inaccurate application forms, which would otherwise be rejected;
- provides you with online advice to complete the application and calculates some of the figures for you; and
- keeps a record of your applications submitted and the associated notices of approval/rejection. You can view and print application details at any time.

You will not be able to apply via the WFA website if your farm is partially in the NVZ and you have both grazing and non-grazing livestock. In this case we recommend you apply by telephone.

The WFA website can be accessed via <https://secure.wholefarm.defra.gov.uk/wps/portal>

If you have not used the WFA website before you will need to register before you can apply for a derogation – the website provides instructions on registration. Once you have registered, the derogation application form can be accessed via the WFA website under the heading “NVZ Derogation Application”. You can ignore all the other services offered by the WFA website should you wish.

If you do not have access to the internet, you may be able to arrange for a farm adviser to submit your application via the WFA website on your behalf.

Annex 1 – Applying for a Derogation

By telephone

You can phone the Environment Agency's Derogation Application Line (0845 603 3113, Mon-Fri, 8am – 6pm) during the application period and they will record your application and provide you with an instant response on whether your application is approved or rejected.

You will need to have all the necessary information to hand before calling – see Annex 2 for details.

By Post

You can obtain a paper application form by calling the Environment Agency's Derogation Application Line. If applying by post, we recommend that you make an early application to allow time to reapply if your application is rejected. Applications received after the application period will be rejected.

3. Completing the application

Annex 2 explains the information you will need to complete an application. You may find it helpful to work through the template to ensure you have all the required information before you begin your application.

4. Applications from farms in the vicinity of a Special Area of Conservation (SAC) or Special Protection Area (SPA)

When assessing derogation applications, the Environment Agency is required to assess if the granting of a derogation is likely to have a significant effect on Special Areas of Conservation or Special Protection Areas. These areas have special protection to avoid negative impacts on habitats.

Applications for 2010 derogations are not affected, but if your farm is in the vicinity of a Special Area of Conservation (SAC) or Special Protection Area (SPA) your application for 2011 or 2012 may be subject to an additional assessment and the outcome of this assessment may mean that the application is refused. Further information about the areas likely to be affected will be available in 2010.

5. When can I expect a decision on my application?

Your completed application will be used to determine if you are eligible for a derogation. If you apply online via the WFA website or by telephone, you will receive an instant response to your application (either approval or rejection). If you apply in writing, you should receive a response within 21 days.

If your telephone or postal application is approved, you will receive a written notice of approval and a reminder of the conditions of the derogation. If applying via the WFA, you should print this off (together with your application information) and keep it as proof that a derogation has been granted for your farm.

If your application is rejected, you will be provided with an explanation of the rejection and an opportunity to appeal. You must comply with the livestock manure N farm limit of 170 kg N/ha/yr if your appeal is rejected.

6. Decisions to reject an application

An application for a derogation will be refused if:

- the application is not made via the WFA website, by telephone or by post using an application form obtained from the EA Derogation Application line;
- the application is incomplete or the information submitted is inaccurate;
- the application is submitted outside the specified dates for submitting applications;
- on the basis of the information submitted, the farm does not have more than 80% of its agricultural area as grass;
- on the basis of the information submitted, the farm does not have sufficient land to comply with livestock manure N farm limits, or
- an appropriate assessment was undertaken under the Habitats Regulations, and it demonstrated that approving a derogation for the farm might cause an adverse impact on nearby a protected site (i.e. a SAC or SPA).

You may be able to re-apply in order, for example, to correct any mistakes made in the application which may have led to its rejection. However, you can only re-apply if the deadline for submitting applications has not passed. **It is, therefore, strongly recommended to submit your application well in advance of the deadline, especially if applying by post.**

7. Appeals against a decision to reject an application

If you think your application for a derogation should not have been rejected, you can appeal to an independent panel. The appeal must be made in writing within 30 days of receiving a notice of rejection. Further information on the independent appeals panel and guidance on how to submit an appeal will be published on the Defra website and available on request from the Defra helpline.

Annex 2 – Completing your application

This annex explains the information you will need to provide in order to complete your application.

- If applying via the WFA website, the information required will be tailored according to your circumstances and some boxes will be completed automatically.
- If applying by phone, you should ensure you have a note of all the required information before calling the Derogation Application Line.
- If applying by post, you must apply on the application form provided by the Environment Agency. No other form of paper application will be accepted. Incomplete or late applications will be rejected.

Section 1 – Farm details

Name:	(A)
Address:	(B)
Post Code:	(C)
CPH number(s):	(D)
Telephone:	(E)
Email:	(F)

Boxes (A) to (C)

- *You will need to provide full address details for your farm.*

Box (D) – CPH number

- *You will need to provide the CPH number/s of the holding (farm) for which you are requesting a derogation.*
- *The details you provide in Sections 2 – 6 of the application form should relate to this CPH number/s.*
- *If you do not have a CPH number contact the RPA helpline (0845 6037777) and ask to be issued with one.*

Boxes (E) and (F) – Telephone number and email address

- *Provision of this information is optional.*

Section 2 – Agricultural area details

Agricultural area of your farm on 1 January (hectares)	(G)
Minimum area of grassland required (hectares)	(H)
Grassland area of your farm on 1 January (ha)	(I)

Completing step 2 of the step-by-step guide at Annex 3 can help you provide the information needed to complete this section of the application.

Box (G) – Agricultural area

- *Agricultural area includes all areas under your control on 1 January including:
 - rented land; and
 - rough grazing.*
- *You must exclude areas of surface water, any hard-standing, buildings, roads, woodland unless the woodland is used for grazing.*

Box (H) – Minimum area of grassland

- *To calculate the minimum area of grassland required on your farm, multiply the agricultural area (G) by 0.8.*
- *This will be calculated automatically if you are applying via the WFA website or telephone.*

Box (I) – Grassland area

- *Grassland includes:
 - both permanent and temporary grassland (temporary implying leys of less than four years),
 - grassland with less than 50% clover, and
 - other crops (e.g. maize) under-sown with grass.*
- *If the value entered here is less than the value in Box (H), your application will be rejected.*

Annex 2 – Completing your application

Section 3 – Details of manure nitrogen from grazing livestock

Estimated amount of manure nitrogen produced by grazing livestock kept on your farm during the calendar year (kg N)	(J)
How much manure nitrogen produced by grazing livestock do you intend to import onto your farm during the calendar year? (kg N)	(K)
How much manure nitrogen produced by grazing livestock do you intend to export off your farm during the calendar year? (kg N)	(L)
Total amount of manure nitrogen from grazing livestock (kg N)	(M)

Completing steps 3, 4 and 5 of the step-by-step guide at Annex 2 can help you provide the information needed to complete this section of the application.

Grazing livestock includes cattle (except veal calves), sheep, deer, goats and horses. It does not include non-grazing livestock (veal calves, pigs and poultry).

Box (J) – Manure N from grazing livestock kept on the farm

- *State the amount of manure nitrogen that will be produced by the number of grazing livestock you expect to keep on your farm during the calendar year.*
- *You must use standard manure N production values when calculating this value.*

Boxes (K) and (L) – Imports and exports of manure N from grazing livestock

- *Enter the amount of manure N from grazing livestock you expect to import or export during the calendar year.*
- *You must use standard figures or the results of sampling and analysis when calculating the amount of manure N.*
- *If you do not intend to import or export any manure then enter a zero into the relevant box.*

Box (M) – Total manure N from grazing livestock

- *To calculate the total manure N from grazing livestock, add together the values given in Boxes (J) and (K), and then subtract the value given in (L).*
- *This will be calculated automatically if you are applying via the WFA website or telephone.*

Section 4 – Details of manure nitrogen from non-grazing livestock

Estimated amount of manure nitrogen produced by non-grazing livestock kept on your farm during the calendar year (kg N)	(N)
How much manure nitrogen produced by non-grazing livestock do you intend to import onto your farm during the calendar year? (kg N)	(O)
How much manure nitrogen produced by non-grazing livestock do you intend to export off your farm during the calendar year? (kg N)	(P)
Total amount of manure nitrogen from non-grazing livestock (kg N)	(Q)

Completing steps 6, 7 and 8 of the step-by-step guide at Annex 2 can help you provide the information needed to complete this section of the application.

Non-grazing livestock refers to types of livestock which are not classed as grazing livestock and includes veal calves, pigs and poultry.

Box (N) – Manure N from non-grazing livestock kept on the farm

- *State the amount of manure nitrogen that will be produced by the number of non-grazing livestock you expect to keep on your farm during the calendar year.*
- *You must use standard manure N production values when calculating this value. Alternatives to the standard figures can be used in some limited circumstances (see page 3 for full details).*
- *If you do not intend to keep any non-grazing livestock on your farm then enter a zero.*

Boxes (O) and (P) – Imports and exports of manure N from non-grazing livestock

- *Enter the amount of manure N from non-grazing livestock you expect to import or export during the calendar year.*
- *You must use standard figures or the results of sampling and analysis when calculating the amount of manure N.*
- *If you do not intend to import or export any manure then enter a zero into the relevant box.*

Box (Q) – Total manure N from non-grazing livestock

- *To calculate the total manure N from non-grazing livestock, add together the values given in Boxes (N) and (O), and then subtract the value given in (P).*

Section 5 – Agricultural area required to comply with the livestock manure N limits

Area required to comply with the manure N limit for grazing livestock (ha)	(R)
Area required to comply with the manure N limit for non-grazing livestock (ha)	(S)
Area required to comply with both livestock manure N limits (ha)	(T)

Completing steps 9 and 10 of the step-by-step guide at Annex 2 can help you provide the information needed to complete this section of the application.

Box (R) – Area required to comply with the manure N limit for grazing livestock

- To calculate the area required to comply with the manure N limit for grazing livestock, divide the value entered in Box (M) by 250.
- This will be calculated automatically if you are applying via the WFA website or telephone.

Box (S) – Area required to comply with the manure N limit for non-grazing livestock

- To calculate the area required to comply with the manure N limit for non-grazing livestock, divide the value entered in Box (Q) by 170.

Box (T) – Area required to comply with both livestock manure N limits

- To calculate the area required to comply with both livestock manure N limits, add together the values given in Boxes (R) and (S).
- This will be calculated automatically if you are applying via the WFA website or telephone.
- If the value in Box (T) is less than the agricultural area entered into Box (G), your application will be rejected.

Annex 3 – Step-by-step guide for calculating compliance with the derogated livestock manure N farm limits

You will need to complete this calculation twice a year:

- At the time you apply for a derogation.
- By 30 April as part of your compliance records relating to the previous calendar year.

However, if the agricultural area of your farm, your actual livestock numbers and imports/exports are the same as in your application, then there is no need to re-do this calculation for your final records, you can simply confirm that the information provided in the plan was accurate.

The eight steps you will need to follow are:

- Step 1** Collect your information
- Step 2** Calculate the agricultural area of your farm including any areas under your control
- Step 3** Calculate the amount of manure N and P₂O₅ produced by **grazing livestock** kept on your farm
- Step 4** Calculate the amount of manure N from **grazing livestock** that is imported onto or exported off your farm
- Step 5** Calculate the total amount of manure N from **grazing livestock**
- Step 6** Calculate the amount of manure N and P₂O₅ produced by **non-grazing livestock** kept on your farm
- Step 7** Calculate the amount of manure N from **non-grazing livestock** that is imported onto or exported off your farm
- Step 8** Calculate the total amount of manure N from **non-grazing livestock**
- Step 9** Calculate how much land you need to comply with the livestock manure N farm limit for grazing livestock (250N) and for non-grazing livestock (170N).
- Step 10** Compare the area of your farm with the area needed to comply with the livestock manure N farm limits

Notes:

- *It is recommended that you make photocopies of the tables so that you have blank copies available for whenever you need to complete this calculation.*
- *Steps 6 and 7 only need to be completed if you keep other (i.e. non-grazing) livestock on your farm or if you import onto your farm manure that was produced by non-grazing livestock.*

Annex 3 – Step-by-step guide for calculating compliance with the derogated livestock manure N farm limits

Step 1 Collect your information

You will need to have available the following basic information:

- a. The area (ha) of all your fields on your farm;
- b. Estimates of livestock numbers expected to be kept on your farm during the forthcoming calendar year (your plan) *OR* records of livestock numbers kept on your farm during the previous calendar year;
- c. Estimates of any anticipated imports or exports of livestock manure (your plan) *OR* records of any imports or exports of livestock manure; and
- d. The results of manure sampling and analysis or the outputs from ENCASH, if applicable.

Step 2 Calculate the agricultural area of the farm

1. Complete **Table 1** as follows:

Column 1 Enter the name of each field on your farm or under your control on the 1 January. Include rough grazing land and any rented land. Use the continuation columns if needed.

Column 2 Enter the area of each field in hectares (from Step 1a). Exclude areas of the field given over to surface water, hard-standing, buildings, roads or woodland unless the woodland is used for grazing.

Note:

- *If you only know field areas in acres you will need to convert them to hectares. To do this, multiply the number of acres by 0.405, e.g. 276 acres = 112 ha.*

Column 3 Insert a tick to indicate if a field is grassland (include grassland with less than 50% clover and other crops (e.g. maize) under-sown with grass).

2. Add up the total of all field areas in column 2 to give the total agricultural area of your farm. Record the total in box **(A)**.
3. Add up the total of all field areas that are grass and record the total in box **(A₁)**.

Annex 3 – Step-by-step guide for calculating compliance with the derogated livestock manure N farm limits

Step 3 Calculate the amount of manure nitrogen and phosphate produced by grazing livestock on your farm

Grazing livestock includes cattle (except veal calves), deer, goats and horses. Table 2 provides the full list of livestock categories that are classified as 'grazing'.

Complete **Table 2** as follows:

Column 2 Enter the number of each livestock type that are expected to be/were on the farm during the calendar year (from Step 1b).

Note:

- *If livestock are on the farm for only part of the year then enter the pro-rata number. For instance, if there are 30 dairy heifer replacements on the farm for just four months then calculate the pro-rata average number for the year (i.e. $30 \times 4/12 = 10$) which is equivalent to having 10 heifers for the whole year.*

Column 4 Multiply the numbers in Columns 2 and 3 in each row and enter the results into Column 4. Add up Column 4 to calculate the total amount of nitrogen produced by all grazing livestock on your farm (**B**).

Column 6 Multiply the numbers in Columns 2 and 5 in each row and enter the results into Column 6. Add up Column 6 to calculate the total amount of phosphate produced by all grazing livestock on your farm (**C**).

Annex 3 – Step-by-step guide for calculating compliance with the derogated livestock manure N farm limits

Table 2 Manure nitrogen (N) and phosphate (P₂O₅) produced by grazing livestock on the farm.

Livestock type and units	2		3		4		5		6	
	Number of livestock units	Total N produced by 1 livestock unit	Total N produced by all these livestock	kg N/year	Total P ₂ O ₅ produced by 1 livestock unit	kg P ₂ O ₅ /year	Total P ₂ O ₅ produced by all these livestock			
1 lamb, 9 months and over, to first lambing, first tupping or slaughter		x 0.7 (note f)	=	kg N/year (notes a, b)	x 0.38 (note f)	=	kg P ₂ O ₅ /year (notes a, b)			
1 sheep, less than 60kg, after lambing or tupping. For ewes this includes one or more suckled lambs up to 6 months		x 7.6	=		x 3.2	=				
1 sheep, over 60kg, after lambing or tupping. For ewes this includes one or more suckled lambs up to 6 months		x 11.9	=		x 3.7	=				
1 goat		x 15.0	=		x 6.9	=				
1 deer for breeding		x 15.2	=		x 6.4	=				
1 deer, other		x 12.0	=		x 4.3	=				
1 horse		x 21	=		x 20	=				
Total N & P₂O₅ produced by all grazing livestock on the farm			B	=	C	=				

Notes:

- (a) Includes an allowance for N losses from livestock housing and manure storage.
- (b) Different units are used for cattle less than 13 months and for lambs – see notes c, d, e and f below.
- (c) Total N produced (kg) during the two months that the animal is in this category.
- (d) Total N produced (kg) during the ten months that the animal is in this category.
- (e) Total N produced (kg) during the three months that the animal is in this category.
- (f) Total N produced (kg) assuming the animal is in this category for six months.

Annex 3 – Step-by-step guide for calculating compliance with the derogated livestock manure N farm limits

Step 4 Calculate the amount of nitrogen in manure from grazing livestock that is imported or exported

You only need to complete this step if you import or export manure that was produced by grazing livestock.

Complete **Table 3** (overleaf) as follows:

- Column 2** You can replace the standard values given in column 2 with the results from sampling and analysis.
- Column 3** Enter the quantity (as t or m³) of each manure type that is expected to be/was imported during the calendar year (from Step 1c).
- Column 4** Multiply Columns 2 and 3 and enter the results in Column 4. Add up Column 4 to calculate the total quantity of nitrogen imported (**D**) during the calendar year.
- Column 5** Enter the quantity (as t or m³) of each manure type that is expected to be/was exported during the calendar year.
- Column 6** Multiply Columns 2 and 5 and enter the results in Column 6. Add up Column 6 to calculate the total quantity of nitrogen exported (**E**) during the calendar year.

Step 5 Calculate the total loading of manure N from grazing livestock

- Transfer value **B** from Table 2 (nitrogen produced by grazing livestock on the farm) to the box in **Table 4** below. Then transfer values **D** and **E** from Table 3 to the boxes below. If you do not import or export livestock manure, then the values of D and E will be zero.
- Add **B** and **D** together, and deduct **E**, to give the net loading of manure N on your farm from grazing livestock (**F**).

Table 4 Livestock manure N loading of the farm.

B (from Table 2) kg N/year	D (from Table 3) kg N/year	E (from Table 3) kg N/year	Manure N loading kg N/year
<input type="text"/>	+ <input type="text"/>	- <input type="text"/>	= F <input type="text"/>

Annex 3 – Step-by-step guide for calculating compliance with the derogated livestock manure N farm limits

Steps 6 and 7 only need to be completed if you keep other livestock on your farm or if you import onto your farm manure that was produced by non-grazing livestock. If you do not keep non-grazing livestock on your farm or import onto your farm manure from other livestock, go straight to Step 9.

Step 6 Calculate the amount of manure nitrogen and phosphate produced by non-grazing livestock on your farm

Table 5 provides the full list of livestock categories that are classified as 'non-grazing'.

1. Complete **Table 5** as follows:

Column 3 Enter the number of each livestock type that are expected to be/were kept on the farm during the calendar year (from Step 1b).

Notes:

- *If the occupancy on your farm is different to the assumed occupancy values shown in column 2, you should adjust the standard values of total N and P produced (given in columns 4 and 6 respectively) using the following equation:*

$$\text{Actual total N and P produced} = \text{Standard value (from table)} \times \frac{\text{Actual occupancy}}{\text{Standard occupancy}}$$

- *Poultry (except ostriches) are in units of 1,000 so, for example, enter 50 for 50,000 birds.*

Column 4 You can replace the standard values given in column 4 in the following instances:

- If your pigs and poultry are permanently housed, you may use values calculated using the ENCASH computer software; or
- If your pigs and poultry are permanently housed AND your housing system only produces solid manure, you may use values determined by sampling and analysis of the manure.

Column 5 Multiply the numbers in Columns 3 and 4 in each row and enter the results into Column 5. Add up Column 5 to calculate the total amount of nitrogen produced by non-grazing livestock on your farm (**G**).

Column 7 Multiply the numbers in Columns 3 and 6 in each row and enter the results into Column 7. Add up Column 7 to calculate the total amount of phosphate produced by non-grazing livestock on your farm (**H**).

Annex 3 – Step-by-step guide for calculating compliance with the derogated livestock manure N farm limits

Table 5 Manure nitrogen (N) and phosphate (P₂O₅) produced by non-grazing livestock on the farm.

Livestock type and units	Occupancy	Number of livestock units	Total N		Total P ₂ O ₅	
			produced by 1 livestock unit (notes a)	kg N/year	kg P ₂ O ₅ /year (notes a, b)	kg P ₂ O ₅ /year produced by all these livestock
1 veal calf	%		x 1.4 (note c)	=	x 0.77 (note d)	=
1000 replacement layer pullet places, up to 17 weeks	n/a		x 210	=	x 150	=
1000 laying hens in cages, 17 weeks and over	89		x 400	=	x 350	=
1000 laying hen places, free range, 17 weeks and over	97		x 530	=	x 390	=
1000 broiler places	97		x 330	=	x 220	=
1000 replacement broiler breeder pullet places, up to 25 weeks	85		x 290	=	x 260	=
1000 broiler breeder places, 25 weeks and over	92		x 700	=	x 520	=
1000 turkey places (male)	95		x 1,230	=	x 1020	=
1000 turkey places (female)	90		x 910	=	x 740	=
1000 duck places	88		x 750	=	x 730	=
1 ostrich place	83		x 1.4	=	x 6.8	=
1 weaner place, 7 to 13 kg	100		x 1.0	=	x 0.34	=
1 weaner place, 13 to 31 kg	71		x 4.2	=	x 1.8	=
1 grower place, 31 to 66 kg (dry fed)	82		x 7.7	=	x 3.9	=
1 grower place, 31 to 66 kg (liquid fed)	88		x 7.7	=	x 3.9	=
1 finisher place, 66 kg and over (dry fed)	88		x 10.6	=	x 5.6	=

Column 1

2

3

4

5

6

7

Annex 3 – Step-by-step guide for calculating compliance with the derogated livestock manure N farm limits

Step 7 Calculate the amount of nitrogen in manure from non-grazing livestock that is imported or exported

You only need to complete this step if you import or export manure from non-grazing livestock. Non-grazing livestock refers to types of livestock which are not classed as grazing livestock and includes pigs, poultry and veal calves. *Table 6 provides the full list of manure types that are classified as originating from 'other' livestock.*

1. Complete **Table 6** (overleaf) as follows:

Column 2 You can replace the standard values given in column 2 with the results from sampling and analysis.

Column 3 Enter the quantity (as t or m³) of each manure type that is expected to be/was imported during the calendar year (from Step 1c).

Column 4 Multiply columns 2 and 3 and enter the results in column 4. Add up column 4 to calculate the total quantity of nitrogen imported (**I**) during the calendar year.

Column 5 Enter the quantity (as t or m³) of each manure type that is expected to be/was exported during the calendar year.

Column 6 Multiply Columns 2 and 5 and enter the results in Column 6. Add up Column 6 to calculate the total quantity of nitrogen exported (**J**) during the calendar year.

Step 8 Calculate the total loading of manure N from non-grazing livestock

1. Transfer value **G** from Table 5 (nitrogen produced by non-grazing livestock on the farm) to the box in **Table 7** below. Then transfer values **I** and **J** from Table 6 to the boxes below. If you do not import or export livestock manure, then the values of I and J will be zero.

2. Add **G** and **I** together, and deduct **J**, to give the net loading of manure N on your farm from non-grazing livestock (**K**).

Table 7 Total loading of manure N from non-grazing livestock.

G (from Table 5) kg N/year	I (from Table 6) kg N/year	J (from Table 6) kg N/year	Manure N loading kg N/year
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Annex 3 – Step-by-step guide for calculating compliance with the derogated livestock manure N farm limits

Step 9 Calculate the area required to comply with the livestock manure N farm limits

1. Transfer value **F** from Table 4 (the manure N loading from grazing livestock) to the relevant box in column 1 of **Table 8** below. Then divide this value by 250 (the limit that applies to manure from grazing livestock) to give the area required to comply with the livestock manure N limit of 250 kg N/ha.
2. Transfer value **K** from Table 7 (the manure N loading from non-grazing livestock) to the relevant box in column 1 of **Table 8** below. Then divide this value by 170 (the limit that applies to manure from non-grazing livestock) to give the area required to comply with the livestock manure N limit of 170 kg N/ha.
3. Add up the values in column 2 to give the total area needed to comply with both livestock manure N limits (**L**).

Table 8 Area required to comply with the livestock manure N limits

Column	1		2
	Manure N loading (kg N)		Area required (ha)
– from grazing livestock	F	$\div 250 \text{ kg N/ha} =$	
– from non-grazing livestock	K	$\div 170 \text{ kg N/ha} =$	
	Total		L

Step 10 Compare the area required to comply with the livestock manure N farm limits with the area of your farm

1. Compare the area required to comply with the livestock manure N farm limits (**L** from Step 9) with the total area of your farm (**A** from Step 2).
2. If **L** is larger than **A**, this means that you are not compliant with this rule and you must make arrangements to either reduce the livestock manure N loading or increase the area of the farm.

**Area required to comply
with the livestock
manure N farm limits**

(ha)

L	
----------	--

Total area of your farm

(ha)

A	
----------	--

A nitrogen and phosphate application **plan** must be produced for each crop grown in each field. A number of **subsequent records** must also be kept. *New requirements that are only applicable on derogated farms are underlined to help you identify what information you will need to add your existing records.*

Your plan	Subsequent records
<p>Record before applying any nitrogen or phosphate fertiliser:</p> <ul style="list-style-type: none"> • Field reference/name; and • Area of the field planted or intended to be planted. 	<p>You must record:</p> <ul style="list-style-type: none"> • within one week of planting a crop: <ul style="list-style-type: none"> – Crop type; and – Date planted (if appropriate) • within one week of ploughing an area of grass, the date of ploughing • by 30 April, if grass, how it was managed (cut or grazed) in the previous calendar year • the crop yield (if arable) within one week of ascertaining it
<p>Step 1: Assessing the Soil Nitrogen Supply (SNS) and the Soil Phosphorus (P) Index</p>	
<p>Methods of assessment</p> <ul style="list-style-type: none"> • Phosphorus – Sampling and analysis for soil P MUST be done at least once every four years for at least every five hectares of the holding. You can rely on the results of previous sampling and analysis provided they are less than four years old. If you have not previously undertaken sampling and analysis for soil P then you must sample at least 75% of the agricultural area of your farm by 1 March 2011 and the remaining 25% by 1 March 2012. • Nitrogen – You can assess soil nitrogen supply using an Index value based on information about the soil type, previous cropping, previous manure and fertiliser use, and winter rainfall. Alternatively, the use of soil sampling and analysis can be used. This will need to include an estimate of the amount of nitrogen that is likely to become available for crop uptake due to the mineralisation of soil organic matter and from previous crop residues. <p>Timing</p> <p>Make an initial assessment before applying any nitrogen or phosphate fertiliser.</p>	

Your plan	Subsequent records
<p>Record the following information</p> <ul style="list-style-type: none"> • Soil type; • Previous crop; • If the previous crop was grass, how it was managed – cut or grazed; • Amount of nitrogen from the soil that is likely to become available for uptake by the crop during the growing season (SNS); • Soil P Index; and • Methods used to ascertain SNS and soil P Index. 	
<p>Step 2: Assessing crop nitrogen and phosphate requirements</p>	
<p>Methods of assessment</p> <p>There are a wide variety of sources of information to help you assess the crop nitrogen and phosphate requirements, including FACTS qualified advisers, PLANET software and The Fertiliser Manual (RB209) – see Further Information.</p> <p>Timing</p> <p>Make an initial assessment for the whole growing season before applying any nitrogen or phosphate fertiliser.</p>	
<p>Record the following information</p> <ul style="list-style-type: none"> • Crop type; • If it is an arable crop, the anticipated yield; • If it is grass, the intended management – cut or grazed; • Anticipated month the crop will be planted (not necessary if previous crop is grass and it has not been ploughed out); • Crop nitrogen and phosphate requirement taking account of SNS and soil P Index; and • A copy of any written advice from a FACTS qualified adviser. 	

Your plan	Subsequent records
<p style="text-align: center;">Step 3: Organic manure applications</p> <p>Methods of assessment You can use typical values for the total nitrogen and phosphate content of the manure and the percentage of the nitrogen that is expected to become available for crop uptake. These typical values can be obtained from a number of sources, including MANNER software and The Fertiliser Manual (RB209) – see Further Information.</p> <p>Alternatively, you may use the results from sampling and analysis of the manure.</p> <p>For both methods you will need to take account of the type of organic manure, the date, rate and method of application and the soil type.</p> <p>Timing Make the assessment before each application of organic manure.</p> <p>Record the following information</p> <ul style="list-style-type: none"> • Area to which the organic manure will be applied; • Quantity of organic manure to be applied; • Planned date of application (month); • Type of organic manure; • Total nitrogen and phosphate content of the organic manure; and • Amount of nitrogen that is likely to become available for crop uptake in the growing season in which the organic manure is applied. 	<p>You must record within one week of each application.</p> <ul style="list-style-type: none"> • Date of application • Area of application (ha) • Quantity of organic manure applied • Method of application • Type of organic manure • Total nitrogen and phosphate content of the organic manure • Amount of nitrogen that is available for crop uptake • Amount of phosphate supplied to meet the crop phosphate requirement
<p style="text-align: center;">Step 4: Manufactured fertiliser applications</p> <p>Methods of assessment The amount of manufactured nitrogen and phosphate fertiliser required can be calculated by deducting the crop available nitrogen and phosphate supplied from all applications of organic manures (identified from Step 3) from the crop nitrogen and phosphate requirements (identified at Step 2).</p>	<p>You must record within one week of each application.</p> <ul style="list-style-type: none"> • Date of application • Amount of nitrogen applied (kg N/ha) • Amount of phosphate applied (kg P₂O₅/ha)

Annex 4 – Field-level records

Your plan	Subsequent records
Step 4: Manufactured fertiliser applications (Cont'd...)	
<p>Timing Make the assessment before each application of manufactured nitrogen or phosphate fertiliser.</p> <p>Record the following information</p> <ul style="list-style-type: none"> • Amount of nitrogen and phosphate needed from manufactured fertiliser, taking account of the supply of nitrogen and phosphate from applications of organic manure; and • Planned date of application (month) 	

Notes

If your actual applications of manufactured fertiliser or organic manure were as planned, there is no need to re-record the details of the application, you can simply confirm that the application was undertaken as planned. However, you will still need to record the actual date of each application. If your actual applications differed from your plan, you will need to record full details of the applications within one week.

Annex 5 – Area of crop types

You must record the area of your farm covered by each crop type that has an N max limit (see Leaflet 7). You may use the table below to record this information. Refer to your field records (see Annex 3) to help you complete this table.

Crop type	Area grown during calendar year (hectares)
Grassland (average area during year)	
Winter wheat	
Spring wheat	
Winter barley	
Spring barley	
Winter oilseed rape	
Sugar beet	
Potatoes	
Forage maize	
Other	

Annex 6 – Stocks and purchases of manufactured nitrogen fertilisers

You must record a summary of the stocks and purchases of manufactured nitrogen fertilisers on your farm. You may use the tables below to record the following information:

- The tonnage and N content (%) of all manufactured nitrogen fertiliser stocks on 1 January and 31 December.
- The tonnage and N content (%) of all manufactured nitrogen fertilisers that are imported and exported off the farm during the calendar year.

Table 1 Manufactured nitrogen fertiliser stocks on farm on 1 January

Fertiliser type (e.g. 25:5:5) N content (%), liquids % on w/v basis	Quantity (tonnes or m ³)

Table 2 Manufactured nitrogen fertilisers (purchased/imported and sold/exported)

Date	Fertiliser type (e.g. 25:5:5)	Amount purchased or imported onto farm (tonnes)	Amount sold or exported off farm (tonnes)

Table 3 Manufactured nitrogen fertiliser stocks on farm on 31 December

Fertiliser type (e.g. 25:5:5)	Quantity (tonnes)

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